

**REMARKS**

Applicants submit this Reply in response to the final Office Action mailed December 30, 2010. Claims 30, 32, 35-44, and 46-58 are pending in this application, of which claims 30 and 44 are independent. By this Reply, Applicants have amended claims 30, 32, 35, 36, 38, 41, 44, 46, 47, 49, and 50-53. No new matter has been added.

In the final Office Action, the Examiner rejected claim 35 under 35 U.S.C. § 112, first paragraph; rejected claims 32, 35-38, 41, and 46-58 under 35 U.S.C. § 112, second paragraph; rejected claims 44, 50, 53, and 54 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent App. Pub. No. 2002/0153083 ("Takagi"); rejected claims 44, 51, 53, and 54 under § 102(b) as being anticipated by U.S. Patent No. 5,248,357 ("Miyanaga"); rejected claims 30, 35-39, 42, 44, 50, 51-54, and 58 under § 102(b) as being anticipated by U.S. Patent No. 4,555,287 ("Goodfellow"); and rejected claims 30, 32, 40, 41, 43, 44, 46-50, and 55-57 under 35 U.S.C. § 103(a) over the following combinations:

- a. claims 46 and 55 over Takagi in view of U.S. Patent No. 6,576,077 ("Mitsuhashi");
- b. claims 32, 40, 43, 46, and 55 over Goodfellow in view of Mitsuhashi;
- c. claims 46 and 55 over Miyanaga in view Mitsuhashi;
- d. claim 56 over Takagi, Goodfellow, or Miyanaga in view of the admitted state of the prior art;
- e. claim 57 over Takagi or Miyanaga in view of the admitted state of the prior art, and further in view of Mitsuhashi;

f. claims 41 and 57 over Goodfellow in view of the admitted state of the prior art, and further in view of Mitsuhashi;

g. claims 30, 44, 47, 48, and 50 over U.S. Patent No. 4,738,738 ("Holroyd I") in view of U.S. Patent No. 5,201,975 ("Holroyd II") and U.S. Patent No. 4,561,927 ("Sumner");

h. claim 47 over Takagi, and further in view of at least one of Holroyd I and U.S. Patent No. 3,143,450 ("Barber");

i. claim 48 over Takagi taken in view of at least one of Holroyd I and Barber, and further in view of Sumner;

j. claim 49 over Takagi, Goodfellow, or Miyanaga in view of U.S. Patent No. 4,288,265 ("Pacciarini"); and

l. claim 43 over Holroyd I in view of Holroyd II and Sumner, and further in view of Mitsuhashi.

Applicants respectfully traverse all pending rejections for at least the reasons discussed below.

#### **Rejection Under 35 U.S.C. § 112, First Paragraph**

The Examiner rejected claim 35 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Examiner asserts, "Claim 35 has been amended to define that the step of assembling the belt is carried out 'during' said radial expansion step and simultaneously with the mutual junction step. The original disclosure does not however describe such a process, this being therefore subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the

application was filed, had possession of the claimed invention, i.e., it is new matter.”

Office Action at 2. The Examiner further asserts, “[C]laim 30 as amended requires a step of ‘radially expanding the expandable support to mutually join the belt structure to said at least one underbelt insert.’ This claim is therefore restricted to the figs. 1-6 embodiment since this is the only embodiment in which radially expanding the expandable support functions to mutually join the belt and the underbelt inserts (as illustrated in figs. 3-4).” Id.

As an initial matter, Applicants disagree with the Examiner’s assertion that the recitations of claim 30 are restricted to the embodiments depicted in Figs. 1-6. In fact, in both depicted embodiments (Figs. 1-6 and Figs. 7-10), no mutual joining between the belt structure and the underbelt inserts may occur without radial expansion of the expandable support.

However, to further clarify the scope of claim 30, Applicants have amended claim 30 to recite, in part:

radially expanding the expandable support; and  
joining the at least one belt layer to said at least one underbelt  
insert . . . .

Further, Applicants have amended claim 35 to recite, in part, “wherein the step of assembling the belt structure on the auxiliary drum is carried out after said radial-expansion step . . . .”

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 35 under 35 U.S.C. § 112, first paragraph.

**Rejections Under 35 U.S.C. § 112, Second Paragraph**

The Examiner rejected claims 32, 35-38, 41, and 46-58 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Examiner asserts, "Claims 32 and 35-38 depend from cancelled claim 31," and "[c]laims 46-58 each depend directly or indirectly from cancelled claim 45." Office Action at 3. Further, the Examiner asserts, with respect to claim 41, "line 3 is awkward and confusing - it seems wording such as 'to' was omitted after 'assembled'." Id.

By this Reply, Applicants have amended dependent claims 32, 35, 36, and 38 to depend from independent claim 30 and amended dependent claims 46, 47, and 49-53 to depend from independent claim 44. Additionally, claim 41 has been amended to recite, in part, "applying a tread band at a radially external position to the belt structure that is assembled to the carcass structure . . . ."

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claims 32, 35-38, 41, and 46-58 under 35 U.S.C. § 112, second paragraph.

**Rejections Under 35 U.S.C. § 102(b)**

Applying 35 U.S.C. § 102(b), the Examiner rejected claims 30, 35-39, 42, 44, 50, 51-54, and 58 as set forth above.

In order to properly establish that either of Takagi, Miyanaga, or Goodfellow anticipates Applicants' claimed invention under 35 U.S.C. § 102, every element of the claims at issue must be found, either expressly or described under principles of inherency, in that single reference. Furthermore, "[t]he identical invention must be

shown in as complete detail as is contained in the... claim.” See M.P.E.P. § 2131, quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989).

No reference cited by the Examiner discloses every element recited in Applicants’ amended claims. Amended independent claim 30 recites:

A method of manufacturing tyres for vehicle wheels, comprising the steps of:

disposing a carcass structure comprising at least one carcass ply on a primary drum;

assembling a belt structure comprising at least one belt layer on an auxiliary drum;

picking up the belt structure from the auxiliary drum;

transferring the belt structure to a coaxially centered position relative to the carcass structure; and

shaping the carcass structure into a toroidal configuration to engage the belt structure with the carcass structure,

wherein a pair of sidewalls, each extending until close to a radially internal edge of the carcass structure, are laterally applied to the carcass structure on opposite sides,

wherein the sidewalls are applied on the primary drum before shaping the carcass structure, and

wherein during said step of assembling said belt structure, at least one underbelt insert is associated with said at least one belt layer at a radially internal position, by:

applying said at least one underbelt insert onto an expandable support, said at least one underbelt insert having an axially internal portion tapering towards an equatorial plane of the tyre and an axially external portion;

radially expanding the expandable support; and

joining the at least one belt layer to said at least one underbelt insert,

wherein an angular rotation is imposed to said at least one underbelt insert concurrently with the radial-expansion step, whereby the axially internal portion is oriented substantially parallel to an inner surface of the belt structure and the axially external portion is oriented tapering towards a rotational axis of the tyre in consequence of said angular rotation.

Amended independent claim 44, although of different scope, recites similar features.

Nowhere does Takagi, Miyanaga, or Goodfellow disclose the features recited in independent claims 30 and 44.

In the final Office Action, with respect to Goodfellow, the Examiner asserts, "As to the tapered axially internal and axially external portions of the insert, Goodfellow illustrates tapered axially internal and external portions - e.g. note the shape of the insert in fig. 13. Further, an angular rotation is imposed on the insert with radial expansion such that the axially internal portion (77) would engage and therefore be parallel to the belt (the breaker/belt 75 was omitted from figs. 13+ only for clarity - note col. 4, lines 40-41) while the axially external portion would taper toward the axis - e.g. note rotation from the fig. 13 to fig. 14 orientations." Final Office Action at 6. Thus, the Examiner seems to assert that component 74 in Fig. 13 of Goodfellow corresponds to the Applicants' claimed underbelt insert.

The Examiner then asserts, "Further, in the Goodfellow method, a pair of sidewalls are laterally applied to opposite sides of the carcass (e.g. fig. 7) as required by claim 30 and further, the primary drum that supports the shaped carcass (in fig. 7) is also therefore fully capable of supporting a carcass with sidewalls applied thereto as required by this intended use recitation in apparatus claim 44." Id. Here, the Examiner seems to assert that components 70+71 in Fig. 7 of Goodfellow correspond to Applicants' claimed sidewalls.

However, Applicants note that Goodfellow states:

FIG. 3 shows the former 10 . . . and around the former a pair of sidewall rubbers 70, 71 have been laid . . . . The sidewall rubbers may, as illustrated, be extruded in one piece with a central web 73 of thin cross-section holding the two sidewalls together as a single unit to be applied to the former. Alternatively the sidewalls may be applied as separate strips 74 as shown in FIG. 12, having a notched edge to engage and adhere to the tread and breaker.

Goodfellow at col. 3, ll. 10-21. This passage clearly establishes that Fig. 12 of Goodfellow refers to an embodiment different than that depicted in Fig. 7.

Similarly, the embodiment of Fig. 13 shows an embodiment corresponding to Fig. 12, and therefore, an embodiment also different from that of Fig. 7. Regardless, in both embodiments, the components 70+71 and 74 are unambiguously identified as being "sidewall rubber." Thus, Applicants respectfully submit that the Examiner cannot properly assert that component 74 of Goodfellow corresponds to the "underbelt insert having an axially internal portion tapering towards an equatorial plane of the tyre and an axially external portion . . . oriented tapering towards a rotational axis of the tyre in the consequence of said angular rotation," as recited in amended independent claim 30.

However, even assuming, *arguendo*, that the Examiner's characterization of Goodfellow is accurate, Goodfellow also fails to disclose at least, "wherein the sidewalls are applied on the primary drum, before shaping the carcass structure," as recited in amended independent claim 30.

Similarly, Takagi and Miyanaga also fail to disclose at least, "wherein the sidewalls are applied on the primary drum, before shaping the carcass structure."

Moreover, with respect to claim 44, Takagi and Miyana fail to disclose, “wherein said actuator members are configured to impose an angular rotation to said at least one underbelt insert concurrently with the radial expansion of the expandable support, whereby the axially internal portion is oriented substantially parallel to an inner surface of the belt structure and the axially external portion is oriented tapering towards a rotational axis of the tyre in consequence of said angular rotation.”

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejections of amended independent claims 30 and 44 under 35 U.S.C. § 102(b) based on Takagi, Miyana, and Goodfellow.

Moreover, rejected claims 35-39, 42, 50, 51-54, and 58 each depend from one of independent claims 30 and 44, and thus, contain all the elements and limitations thereof. As a result, dependent claims 35-39, 42, 50, 51-54, and 58 are allowable at least due to their corresponding dependence from independent claims 30 or 44.

#### **Rejections Under 35 U.S.C. § 103(a)**

Applying 35 U.S.C. § 103(a), the Examiner rejected claims 30, 32, 40, 41, 43, 44, 46-50, and 55-57 as set forth above. However, a *prima facie* case of obviousness, the requirements of which are discussed below, has not been established for each rejected claim, as amended.

To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must disclose all of the claim limitations, or the claim rejection must explain why the differences between the prior art and the claim limitations would have been obvious to one of ordinary skill in the art. See M.P.E.P. § 2141.



A *prima facie* case of obviousness has not been established because, among other things, none of Takagi, Goodfellow, Mitsubishi, Miyanaga, Holroyd I, Holroyd II, Sumner, Barber, or Pacciarini, alone or in any combination, teaches or renders obvious every feature of Applicants' claims. Applicants have already established in the previous section that Takagi, Miyanaga, and Goodfellow fail to teach or render obvious at least, "wherein the sidewalls are applied on the primary drum, before shaping the carcass structure," as recited in amended independent claim 30. Further, with respect to claim 44, Takagi and Miyanaga fail to teach or render obvious at least, "wherein said actuator members are configured to impose an angular rotation to said at least one underbelt insert concurrently with the radial expansion of the expandable support, whereby the axially internal portion is oriented substantially parallel to an inner surface of the belt structure and the axially external portion is oriented tapering towards a rotational axis of the tyre in consequence of said angular rotation." The obviousness rejections fail to overcome the above-noted deficiencies of the § 102(b) rejections.

In fact, it appears that not only does Holroyd I fail to teach or render obvious "wherein the sidewalls are applied on the primary drum, before shaping the carcass structure," but Holroyd I actually teaches away from such features, and therefore, cannot be properly combined with other references in a 35 U.S.C. § 103(a) rejection.

Holroyd I states:

The simplification is to assemble only the inner lining, ply insulation, carcass reinforcement ply, beads and apices and not assemble the bead chafer strips, toe strips or sidewall components on the flat drum. Thus the carcass assembled flat has only the essential reinforcement components in place when it is then shaped to a toroid.

Holroyd I at col. 6, ll. 34-40. In fact, the sidewalls of Holroyd I are applied to the shaped carcass within the mould:

Tire sidewalls 43 and 44 are then fitted, with vacuum applied to the mould to remove air one to either side of the tire each carried in a sidewall plate 45 which engages the inner diameters D1 of the tread mould segments 2. Once again the sidewalls 43 and 44 are formed in their respective sidewall plates 45 so that they are always the required annular shape and deformation or stretching is not required for assembly to the tire.

Holroyd I at col. 6, ll. 60-68. Thus, Holroyd I teaches away from applying the sidewalls on the primary drum, before shaping the carcass structure.

Moreover, the Examiner's additional citation of Mitsuhashi, Holroyd II, Sumner, Barber, and Pacciarini fail to cure the deficiencies of Takagi, Miyanaga, Goodfellow, and Holroyd I, as these references similarly fail to teach or render obvious at least the aforementioned claim elements. The purportedly admitted prior art also fails to cure the deficiencies.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejections of amended independent claims 30 and 44 under 35 U.S.C. § 103(a) based on Takagi, Goodfellow, Mitsuhashi, Miyanaga, Holroyd I, Holroyd II, Sumner, Barber, and Pacciarini.

Moreover, claims 32, 40, 41, 43, 46-50, and 55-57 each depend from one of independent claims 30 and 44, and thus, contain all the elements and limitations thereof. As a result, dependent claims 32, 40, 41, 43, 46-50, and 55-57 are allowable at least due to their corresponding dependence from independent claims 30 or 44.

**Claim Scope**

It is to be understood that Applicants are in no way intending to limit the scope of the claims to any exemplary embodiments described in the specification or abstract and/or shown in the drawings. Rather, Applicants believe that they are entitled to have the claims interpreted broadly, to the maximum extent permitted by statute, regulation, and applicable case law.

**CONCLUSION**

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

If the Examiner believes that a telephone conversation might advance prosecution of this application, the Examiner is cordially invited to call Applicants' undersigned attorney at (404) 653-6435.

Applicants respectfully note that the Office Action contains a number of assertions concerning the related art and the claims. Regardless of whether those assertions are addressed specifically herein, Applicants respectfully decline to automatically subscribe to them.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account 06-0916.

Respectfully submitted,

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